

REMARKS

After entry of the present Amendment, claims 1-20 remain pending in the application. Claims 4, 6, and 8-11 have been amended merely to address dependency issues, and claims 13-20 have been added. No new matter has been introduced by the amendments to the claims or by new claims 13-20.

Claims 6-12 stand rejected under 35 U.S.C. §112, second paragraph as improperly dependent on multiple dependent claims. As indicated above, claims 6 and 8-11 have been amended for dependency and it is respectfully submitted that the rejection of claims 6-12 under 35 U.S.C. §112 has been overcome in view of these amendments to claims 6 and 8-11.

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,164,248 to Lehmann in view of Great Britain Patent No. 934,531 to Refson. The Applicants respectfully traverse this rejection on the basis that the Examiner has **not** established a *prima facie* case of obviousness because the combination of Refson with Lehmann fails to teach or suggest all the claim limitations of independent claim 1. Further, even if one assumes for argument's sake that all claim limitations are taught or suggested by combining Refson with Lehmann, there is clearly no motivation to combine Refson with Lehmann.

As the Examiner is aware, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a

reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP 2143.

In the office action dated January 10, 2007, the Examiner properly acknowledges that the “adjusting member taught by Lehmann does not specify the sealing method used in the valve.” The Examiner then contends that Refson discloses a “valve surrounded by a sealing ring (15)” arranged with a small clearance around the adjusting member. The Examiner therefore combines Refson with Lehmann to arrive at the invention claimed in independent claim 1. However, the Examiner’s contentions are not accurate. Simply stated, Refson does not disclose, teach, or even suggest a valve surrounded by a sealing ring arranged with a small clearance around the adjusting member. To the contrary, the sealing ring 15 of Refson is integral with and extends from the adjusting member 2. As disclosed on page 1, line 68-72 of Refson, “[t]he frusto-conical portion 14 is provided with a series of raised intersecting edges 15 forming a lattice pattern and thus leaving a pattern of depressions 17 in its surface.” As such, it is clear that the sealing ring of Refson is merely a lattice pattern defining a pattern of depressions in the adjusting member and is thus not arranged with a small clearance around the adjusting member as claimed in claim 1.

In fact, Refson teaches away from a sealing ring that is arranged with a small clearance around the adjusting member. As disclosed from page 1, line 81 to page 2, line 5 of Refson, “...a reticulation pattern is provided in which there is at least one closed depression 17 in any route for the passage of fluid on the interface of the plug and the valve body between any two ports in the plug and/or in the valve body when the valve is in the

closed position, and between any said port and the axial ends of the interface in all circumstances.” As such, “at least one closed depression 17” eliminates any possibility of an arrangement of the sealing ring with a small clearance around the adjusting member.

For the reasons set forth above, it is clear that the Examiner has, at a minimum, failed to satisfy the third criterion for a prima facie case of obviousness, i.e., showing that the combination of prior art references teach or suggest each and every element of the claimed invention. Therefore, on this basis alone, the Examiner’s §103(a) rejection with respect to claim 1 is overcome.

Additionally, the Examiner also fails to satisfy the first criterion of providing a teaching or suggestion to modify Lehmann or a teaching or suggestion to combine Refson with Lehmann. As the Examiner is undoubtedly aware, the “mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination.” (See MPEP §2143.01) Existing precedent provides guidance for establishing a motivation to modify a reference or references. In particular, “[t]he motivation to modify the prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention.” *Alza Corp. v. Mylan Laboratories Inc.*, 391 F.3d 1365 (Fed. Cir. 2004). While there is presently flux in the manner in which motivation to modify or combine references can be established, it still remains necessary for an Examiner to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed, as evidenced by the Memorandum from Margaret A. Focarino, Deputy

Commissioner for Patent Operations, on the Supreme Court decision on *KSR Int'l Co., v. Teleflex, Inc.*, dated May 3, 2007 and attached as Exhibit A.

Lehmann is directed toward a control device for the coolant and heating circulation circuit of an internal combustion engine. Refson, on the other hand, is directed toward a plug valve for use in laboratory equipment. Therefore, it is clear that Refson has nothing whatsoever to do with a coolant and heating circulation circuit of an internal combustion engine.

Neither Lehmann nor Refson provide a teaching or suggestion nor has the Examiner identified why a person of ordinary skill in the art would have combined these references. There is no suggestion or motivation disclosed in Lehmann or Refson to combine the control device for the coolant and heating circulation circuit of an internal combustion engine with a plug valve for laboratory equipment. One of ordinary skill in the art would not be motivated to combine the apparatus for controlling coolant of an internal combustion engine with the apparatus for controlling laboratory equipment.

Further, Lehmann teaches away from the specific claimed structure and function of the subject invention. Specifically, as disclosed in column 4, line 11 of Lehmann, "...since in each angle position, cross-sections are opened in the radial direction, only very slight pressure drops occur across the control device as well. *As a result, special sealing of the individual inlets and outlets may be omitted.*" In other words, Lehmann teaches a configuration of a control valve that eliminates the need for special sealing such as the sealing ring. In contrast, the invention as claimed in the subject application focuses on the sealing ring to be pressed firmly against the side wall of the control valve under the action of the pressure of the fluid.

In view of the foregoing, it is respectfully submitted that independent claim 1, as well as the claims that depend therefrom, are both novel and non-obvious such that these claims are in condition for allowance, which allowance is respectfully requested.

The proper fee for a three-month extension of time is submitted herewith. If any additional fees are necessary, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 08-2789 in the name of Howard & Howard.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS

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Date

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MEMORANDUM

DATE: May 3, 2007

TO: Technology Center Directors

FROM: Margaret A. Forcino
Deputy Commissioner
for Patent Operations

SUBJECT: Supreme Court decision on *KSR Int'l Co., v. Teleflex, Inc.*

The Supreme Court has issued its opinion in *KSR*, regarding the issue of obviousness under 35 U.S.C. § 103(a) when the claim recites a combination of elements of the prior art. *KSR Int'l Co. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). A copy of the decision is available at <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>. The Office is studying the opinion and will issue guidance to the patent examining corps in view of the *KSR* decision in the near future. Until the guidance is issued, the following points should be noted:

- (1) The Court reaffirmed the *Graham* factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under *Graham* are:
- (a) determining the scope and contents of the prior art;
 - (b) ascertaining the differences between the prior art and the claims in issue;
 - (c) resolving the level of ordinary skill in the pertinent art; and
 - (d) evaluating evidence of secondary consideration.

Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

- (2) The Court did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

- (3) The Court rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.



(4) The Court noted that the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it was "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. The Court specifically stated:

Often, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

KSR, slip op. at 14 (emphasis added).

Therefore, in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.